

IN THE CLAIMS:

The following is a complete listing of the claims, and replaces all earlier listings and all earlier versions.

1. (Original) An image processing method for mapping an input color of an input color gamut to an output color of an output color gamut, said method comprising the steps of:

inputting an input color signal of the input color gamut, which includes a signal indicating brightness and a signal indicating tincture; and

mapping the signal indicating brightness and the signal indicating tincture on the basis of the input and output color gamuts,

wherein the mapping maps the signal indicating brightness using a mapping condition which is computed in accordance with highlight portions of the input and output color gamuts, and increases a degree of mapping of the highlight portion compared to middle lightness.

2. (Original) The method according to claim 1, wherein the mapping condition is given by a piecewise function.

3. (Original) The method according to claim 2, wherein the piecewise function uses a continuous spline function of first order or higher.

4. (Original) The method according to claim 1, wherein the mapping condition is computed in accordance with dark portions of the input and output color gamuts.

5. (Original) The method according to claim 1, wherein the mapping maps the signal indicating tincture using a mapping condition which is computed in accordance with high-saturation portions of the input and output color gamuts at a predetermined hue, and increases a degree of mapping of the high-saturation portion compared to a low-saturation portion.

6. (Original) The method according to claim 1, wherein the mapping condition is adjustable according to a user instruction.

7. (Original) An image processing method for mapping an input color of an input color gamut to an output color of an output color gamut, said method comprising the steps of:

inputting an input color signal of the input color gamut, which includes a signal indicating brightness and a signal indicating tincture; and

mapping the signal indicating brightness and the signal indicating tincture on the basis of the input and output color gamuts,

wherein the mapping maps the signal indicating tincture using a mapping condition which is computed in accordance with high-saturation portions of the

input and output color gamuts at a predetermined hue, and increases a degree of mapping of the high-saturation portion compared to a low-saturation portion.

8. (Original) The method according to claim 7, wherein the mapping condition is given by a piecewise function.

9. (Original) The method according to claim 8, wherein the piecewise function uses a continuous spline function of first order or higher.

10. (Original) The method according to claim 7, wherein the mapping condition is computed in accordance with high-saturation portions of the input and output color gamuts at a brightness and hue of the input color.

11. (Original) The method according to claim 7, wherein the mapping condition is adjustable according to a user instruction.

12. (Canceled).

13. (Currently Amended) [[The]] An image processing method according to claim 12 for mapping an input color of an input color gamut to an output color of an output color gamut, said method comprising the steps of:

^{compression}
executing a first mapping process for the input color gamut in
accordance with the input and output color gamuts; and
^{decompression}
executing a second mapping process for a mapped color gamut
obtained by the first mapping process in accordance with the mapped color gamut and
output color gamut,

wherein the first mapping process is a process for compressing a color gamut, and the second mapping process is a process for expanding the color gamut.

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14. (Original) The method according to claim 1¹², wherein the second mapping process performs a mapping process that pertains to brightness and then performs a mapping process that pertains to saturation.

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15. (Original) The method according to claim 1¹², wherein the second mapping process performs the enlargement process in accordance with a limit value computed from the input color gamut.

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16. (Currently Amended) The method according to claim 1¹² ~~13~~, wherein the first mapping process maps the input color into the output color gamut by performing adjustment processes of lightness, hue, and saturation of an input color of the input color gamut.

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17.

(Currently Amended) A computer program product comprising a computer readable medium ~~having a~~ comprising computer program code, for an image processing method for mapping an input color of an input color gamut to an output color of an output color gamut, said ~~product~~ method comprising the steps of:

~~an input process procedure code~~ for inputting an input color signal of the input color gamut, which includes a signal indicating brightness and a signal indicating tincture; and

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~~a mapping process procedure code~~ for mapping the signal indicating brightness and the signal indicating tincture on the basis of the input and output color gamuts,

wherein the mapping maps the signal indicating brightness using a mapping condition which is computed in accordance with highlight portions of the input and output color gamuts, and increases a degree of mapping of the highlight portion compared to middle lightness.

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18.

(Currently Amended) A computer program product comprising a computer readable medium ~~having a~~ comprising computer program code, for an image processing method for mapping an input color of an input color gamut to an output color of an output color gamut, said ~~product~~ method comprising the steps of:

~~an inputting process procedure code~~ for inputting an input color signal of the input color gamut, which includes a signal indicating brightness and a signal indicating tincture; and

~~a mapping process procedure code for mapping the signal indicating~~
brightness and the signal indicating tincture on the basis of the input and output color
gamuts,

wherein the mapping maps the signal indicating tincture using a
mapping condition which is computed in accordance with high-saturation portions of the
input and output color gamuts at a predetermined hue, and increases a degree of mapping of
the high-saturation portion compared to a low-saturation portion.

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19. (Currently Amended) A computer program product comprising a
computer readable medium ~~having a~~ comprising computer program code, for an image
processing method for mapping an input color of an input color gamut to an output color of
an output color gamut, said ~~product~~ method comprising the steps of:

~~a first mapping process procedure code for executing a first mapping~~
process for the input color gamut in accordance with the input and output color gamuts; and

~~a second mapping process procedure code for executing a second~~
mapping process for a mapped color gamut obtained by the first mapping process in
accordance with the mapped color gamut and output color gamut,

wherein the first mapping process is a process for compressing a
color gamut, and the second mapping process is a process for expanding the color gamut.

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20. (Currently Amended) An image processing apparatus for mapping an
input color of an input color gamut to an output color of an output color gamut, comprising:

an inputting means for inputting section, arranged to input an input color signal of the input color gamut, which includes a signal indicating brightness and a signal indicating tincture; and

a mapping means for mapping section, adapted to map the signal indicating brightness and the signal indicating tincture on the basis of the input and output color gamuts,

wherein the mapping maps the signal indicating brightness using a mapping condition which is computed in accordance with highlight portions of the input and output color gamuts, and increases a degree of mapping of the highlight portion compared to middle lightness.

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21. (Currently Amended) An image processing apparatus for mapping an input color of an input color gamut to an output color of an output color gamut, comprising:

an inputting means for inputting section, arranged to input an input color signal of the input color gamut, which includes a signal indicating brightness and a signal indicating tincture; and

a mapping means for mapping section, adapted to map the signal indicating brightness and the signal indicating tincture on the basis of the input and output color gamuts,

wherein the mapping maps the signal indicating tincture using a mapping condition which is computed in accordance with high-saturation portions of the

input and output color gamuts at a predetermined hue, and increases a degree of mapping of the high-saturation portion compared to a low-saturation portion.

21/22. (Currently Amended) An image processing apparatus for mapping an input color of an input color gamut to an output color of an output color gamut, comprising:

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a first mapping ~~means for executing~~ section, adapted to execute a first mapping process for the input color gamut in accordance with the input and output color gamuts; and

a second mapping ~~means for executing~~ section, adapted to execute a second mapping process for a mapped color gamut obtained by the first mapping process in accordance with the mapped color gamut and output color gamut,

wherein the first mapping process is a process for compressing a color gamut, and the second mapping process is a process for expanding the color gamut.
